Fact Sheet

US Army Engineer
Research and Development Center
Waterways Experiment Station

March 2000

Public Affairs Office Ž 3909 Halls Ferry Road Ž Vicksburg, MS 39180-6199 Ž (601) 634-2504 Ž http://www.wes.army.mil

Airfield Pavement Evaluation

Purpose: Determine the structural adequacy of the existing pavements to accommodate mission aircraft, provide technical data required in developing maintenance strategies that optimize use of available funding and provide information for establishing work plans necessary to reach and maintain AR 420-72 facility condition requirements, and provide data for updating runway bearing strengths reported in aviation flight publications.

HWD testing at Campbell AAF

Background: In May 1982, the Department of the Army initiated a program to determine and evaluate the physical properties, load-carrying capacity for various aircraft, and general condition of the pavements at major U.S. Army airfields (AAF). Up until FY 97, the U.S. Army Center for Public Works centrally funded a program for periodic structural evaluation and/or condition surveys of AAFs in accordance with AR 95-2, "Air Traffic Control, Airspace, Airfields, Flight Activities, and Navigational Aids." AR 95-2 requires pavement evaluations to be scheduled on a recurring 5-year cycle for category 1 airfields, heliports, and helipads. Funding is now the responsibility of the controlling MACOM or installation and the performance of these evaluations is the responsibility of the U.S. Army Engineer Waterways Experiment Station (WES).

Dynamic cone penetrometer

Facts: WES developed a nondestructive testing pavement evaluation procedure to determine the structural capacity and physical properties of pavements. This procedure includes the analysis of heavy weight deflectometer load and deflection measurements, Portland cement concrete flexural strength determinations based on "on-the-spot" testing with a portable seismic pavement analyzer, results from previous tests, dynamic cone penetrometer test results, and surface distress observed during the condition survey. The method used to report pavement load-carrying capacity is the standard Aircraft Classification Number-Pavement Classification Number system.

PSPA flexural strength determination

Point of Contact: For more information contact Mr. Bob Grau at (601) 634-2115 or e-mail at graur1@wes.army.mil. General information on WES is available on the web site at http://www.wes.army.mil.